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EXAMINER

DUNN, DAVID R

ART UNIT

PAPER NUMBER

3616

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3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,299

Applicant(s)

KNOX, MATTHEW J.

Examiner

David Dunn

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 12/5/01 is acknowledged. See enclosed IDS form.

Specification

2. The disclosure is objected to because of the following informalities: on page 8, line 12, "Microprocessor 14" should be --Microprocessor 12-- or --Memory 14--; on page 9, line 4, "AL\$" should be --ALR--; on page 9, 4th paragraph, it appears that "At step 52 it is determined if ALR is enabled" should be --At step 52 it is determined if ALR is **to be** enabled-- (added words in bold); similarly --to be-- should be inserted before "enable" in lines 5 and 6 in the same paragraph; on page 11, line 13, "disables" should be --enables-- (see step 92 in Figure 4); on page 19, line 3, "step 100" should be --step 214--.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 6 recites that the pre-tensioner is activated before, or the same time as, the automatic locking restraint. The specification discloses the ALR being activated before the pre-tensioner; see for example, Figure 6.

Additionally, the specification does not describe the times as claimed in claims 6 and 7. Correction of specification is required to properly describe these time periods.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "343" (as recited on page 17). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-26, 30-48, and 56-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite as the first step of the method begins: "event". This is unclear, as it appears some language is missing, such as --upon sensing said event, --.

Claim 6 is indefinite, as it does not appear to agree with the flow of events as claimed in claim 1. Claim 6 claims the pre-tensioner activated before or at the same time as the ALR; however, claim 1 recites that the ALR is activated before the pre-tensioner.

Claim 8 is indefinite as step (b) recites enabling **and/or** disabling at least one occupant restraint. This is indefinite as "at least one" can mean only one, and therefore, it is unclear how one item can be enabled **and** disabled.

Art Unit: 3616

Claims 30 and 52 are indefinite for the reasons listed above for claim 8.

Claims 25 and 47 are indefinite as it is unclear what is meant by "a manual automatic restraint". These terms appears to be contradicting.

With respect to claim 56, it is unclear what is meant by "adjusting a normalized occupant weight based on the weight in said seat."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 8, 30, 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Mazur et al. (6,203,059).

Mazur et al. discloses a method of managing the enablement and disablement of occupant restraints in a motor vehicle, said method comprising: (a) determining if a seat belt is buckled (see step 704; Figure 7); and (b) in response to the determination of step (a) enabling or disabling a pretensioner or air bag (see Figure 7; see also column 5, lines 37-42).

With respect to claims 30 and 52, Mazur et al. discloses a processor (control module 30), a memory (inherent to operate a control module) and a bus (inherent to connect the components).

Art Unit: 3616

The load management procedure is also inherent in the memory such that the control processor can operate the flow chart as shown in Figure 7.

9. Claims 8, 9, 11, 12, 15, 30, 31, 33, 34, 37, 52, and 56-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Foo et al. (6,341,252).

Foo et al. discloses a method of managing the occupant restraints in a vehicle, including (a) determining if a seat belt is buckled (see Step 210 in Figure 5B), and (b) in response to (a) enabling or disabling a pre-tensioner (see for example Figure 4, fire or no-fire conditions). Foo et al. also (c) determines if the weight in the seat is less than a threshold (as shown in Figure 4) to enable or disable the pre-tensioner. Foo et al. discloses a multi-stage airbag (20) that can be disabled or enabled based upon various weight and/or buckle conditions (see Figure 4).

With respect to claim 57, Foo et al. discloses a weight sensor which can inherently determine if the seat is unoccupied; further Foo et al. also shows an occupant presence detector (142). Foo et al. also discloses determining if the seat belt is extended (see payout sensor; column 4, lines 55-56).

10. Claim 60 is rejected under 35 U.S.C. 102(b) as being anticipated by Bell (3,740,711).

Bell discloses determining if a seat belt is buckled (see Figure 1), if the seat is unoccupied (see Figure 1) and if the belt is buckled and the seat is unoccupied, recording an unoccupied status of the seat (see column 4, lines 1-20).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3616

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-7 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura et al. (5,552,986) in view of Takeuchi et al. (5,338,063).

Omura et al. discloses a method of controlling the activation of occupant restraints in a motor vehicle for a high g event, said method comprising: activating an ALR (see S5, Figure 2), then activating a pre-tensioner of the seat belt (S10, Figure 2; column 6, lines 40-45). Omura discloses enabling/activating the ALR prior to occurrence of said event (see Figure 2) and enabling the pretensioner after the event (event is shown at S9).

Omura et al. fails to show activating an air bag after the pre-tensioner.

Takeuchi et al. teaches a method of first activating a pre-tensioner and then activating the air bag (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omura et al. with the teachings of Takeuchi et al. in order to provide an additional restraint step to further protect the occupant.

With respect to claims 6 and 7, while Omura and Takeuchi do not describe specific time periods, it would have been obvious to one of ordinary skill in the art at the time the invention was made to activate the restraints at any necessary time, such as 0 to 10 milliseconds, as is old and well known in the art.

With respect to claim 55, while Omura inherently has a memory medium to operate the flow chart as shown in Figure 2, etc, Takeuchi explicitly discloses a memory medium (see RAM and ROM, Figure 3) within the computer system.

Art Unit: 3616

13. Claims 10, 13, 14, 16, 25, 26, 32, 35, 36, 38, 47, and 48 are rejected under 35 U.S.C.

103(a) as being unpatentable over Foo et al. in view of Omura et al.

Foo et al. is discussed above and fails to show an ALR.

Omura et al. is discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Foo et al. with the teachings of Omura et al. in order provide an ALR that could be enabled or disabled upon certain conditions in order to better protect the occupant. It would have been obvious to one of ordinary skill in the art at the time the invention was made to enable or disable the other restraints dependent upon various conditions as required to protect the occupants.

14. Claim 27, 29, 49, 51, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (6,467,804) in view of Oestreicher et al. (6,243,632).

Sakai et al. discloses a method comprising: (a) determining a weight in a seat of the motor vehicle from measurements obtained by a weight sensor system (see column 4, lines 12-20 and Step 108 in Figure 5); (b) determining if a seat belt of the seat is tightened by comparing values obtained by the weight sensor system at the rear right and rear left of the seat (see column 4, lines 40-45); and if determining that the belt is tightened by comparing the loads to a threshold value, disabling the air bag (column 5, lines 5-23). With respect to claim 29, Sakai derives a difference from the values (see step 103 in Figure 5).

With respect to claims 49 and 54, Sakai et al. discloses a processor (CPU, Figure 4), a memory (inherent to operate a CPU) and a bus (inherent to connect the components). The load

Art Unit: 3616

management procedure is also inherent in the memory such that the control processor can operate the flow chart as shown in Figure 5; also note column 3, lines 35-39.

Sakai et al. fails to show deriving an adjusted weight.

Oestreicher et al. teaches taking a measured weight and a correction factor to derive an adjusted weight (see Figure 10, also column 6, lines 29-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakai et al. with the teachings of Oestreicher et al. in order perform calculations in weight values in order to make the processor easier to program.

15. Claims 18, 21-24, 40, and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foo et al. in view of Sakai et al.

Foo et al. is discussed above and fails to show determining the belt is tightened.

Sakai et al. is discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Foo et al. with the teachings of Sakai et al. in order to better determine the position of the occupant or determine if a child seat was present to better protect the occupant.

16. Claims 19, 20, 41, and 42 rejected under 35 U.S.C. 103(a) as being unpatentable over Foo et al. in view of Sakai et al. as applied above, and further in view of Omura et al.

The combination of Foo et al. and Sakai et al. is discussed above and fails to show an ALR.

Omura et al. is discussed above.

Art Unit: 3616

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify combination of Foo et al. and Sakai et al. with the teachings of Omura et al. in order to better protect the occupants.

17. Claims 17 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foo et al. in view of Omura et al as applied above, and further in view of Mazur et al.

The combination of Foo et al. and Omura et al. is discussed above and fails to show signaling an alert.

Mazur et al. teaches signaling an alert (see column 5, lines 11-15) in an unsafe condition.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Foo et al. and Omura et al. with the teachings of Mazur et al. in order to warn the occupant in the case of an unsafe condition.

18. Claims 28 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. in view of Oestreicher et al. as applied above, and further in view of Omura et al.

The combination of Sakai et al. and Oestreicher et al. is discussed above and fails to show an ALR.

Omura et al. is discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakai et al. and Oestreicher et al. with the teachings of Omura et al. in order to further protect the occupant.

19. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mazur et al. in view of Sakai et al.

Art Unit: 3616

Mazur et al. is discussed above and fails to show means for determining the belt is tightened.

Sakai et al. is discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mazur et al. with the teachings of Sakai et al. in order to better determine the position of the occupant or determine if a child seat was present to better protect the occupant.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Swann et al. shows a belt tightener that is activated before a collision. Miciuda et al. shows a communication bus for a safety system. Shankar et al. shows a control system of a safety apparatus which measures and stores the occupant's weight. McCurdy shows a protection system of interest.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Dunn whose telephone number is 703-305-0049. The examiner can normally be reached on Mon-Thur, alt. Fridays, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Art Unit: 3616

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-1113.

A handwritten signature in black ink, appearing to read 'David Dunn', with a long horizontal line extending to the right.

David Dunn
Examiner
Art Unit 3616